Serial No.: 10/058,825 Filed: January 30, 2002

Page : 3 of 20

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1-19. (Cancelled).

- 20. (Previously presented) A method for the production of modified endosperm, which comprises the step of introducing a nucleic acid molecule into a plant, the nucleic acid molecule comprising a promoter that targets expression to female germ line cells and a sequence whose transcription product comprises a partial or full-length *Arabidopsis* DNA methyltransferase 1 (Met1) sequence, wherein the introduced nucleic acid is effective for down-regulating one or more DNA methylating enzymes present in the plant, whereby the degree of DNA methylation of nucleic acid in the plant is reduced as compared to a control plant.
- 21. (Previously presented) A method as claimed in claim 20 wherein the transcription product comprises an antisense nucleic acid.
- 22. (Cancelled)
- 23-61. (Cancelled).
- 62. (Previously presented) A method for the production of modified endosperm, which comprises the step of introducing a nucleic acid molecule into a plant, the nucleic acid molecule comprising a promoter that targets expression to female germ line cells and a sequence whose transcription product comprises a partial or full-length *Z. mays* DNA sequence orthologous to the *Arabidopsis* DNA methyltransferase 1 (Met1) sequence, wherein the introduced nucleic acid is effective for down-regulating one or more DNA methylating enzymes present in the plant,

Serial No.: 10/058,825 Filed: January 30, 2002

Page : 4 of 20

whereby the degree of DNA methylation of nucleic acid in the plant is reduced as compared to a control plant.

63. (Previously presented) A method as claimed in claim 62, wherein the transcription product comprises an antisense nucleic acid.

- 64. (Previously presented) A method as claimed in claim 20, wherein the plant is a dicotyledonous plant.
- 65. (Previously presented) A method as claimed in claim 20, wherein the transcription product down-regulates one DNA methylating enzyme.
- 66. (Previously presented) A method as claimed in claim 20, wherein the transcription product comprises a full or partial sense copy of the *Arabidopsis* DNA methyltransferase 1 (Met1) sequence.
- 67. (Previously presented) A method as claimed in claim 66, wherein the sense copy is a partial sense copy.
- 68. (Cancelled).
- 69. (Previously presented) A method as claimed in claim 62, wherein the transcription product comprises a full or partial sense copy of the Z. mays sequence.
- 70. (Cancelled)
- 71. (Previously presented) A method as claimed in claim 66, wherein the plant is a dicotyledonous plant.
- 72-75. (Cancelled)

Serial No.: 10/058,825 Filed: January 30, 2002

Page : 5 of 20

76. (Currently amended) A method as claimed in claim [72]62, wherein the plant is a dicotyledonous plant.

77. (Previously presented) A method as claimed in claim 20, wherein the promoter targets expression in female gametic cells.

78. (Previously presented) A method as claimed in claim 77, wherein the transcription product comprises an antisense nucleic acid.

79. (Cancelled)

80. (Previously presented) A method as claimed in claim 77, wherein the transcription product comprises a partial sense copy of the *Arabidopsis* DNA methyltransferase 1 (Met1) sequence.

- 81. (Previously presented) A method as claimed in claim 77, wherein the plant is a dicotyledonous plant.
- 82. (Previously presented) A method as claimed in claim 77, wherein the plant is a monocotyledonous plant.
- 83. (Previously presented) A method as claimed in claim 81, wherein the plant is a *Brassica* plant.
- 84. (Previously presented) A method as claimed in claim 81, wherein the plant is a *B. napus* plant.
- 85. (Previously presented) A method as claimed in claim 82, wherein the plant is a Zea mays plant.

Serial No.: 10/058,825 Filed: January 30, 2002

Page : 6 of 20

86. (Previously presented) A method as claimed in claim 62, wherein the promoter targets expression to female gametic cells.

- 87. (Previously presented) A method as claimed in claim 86, wherein the transcription product comprises an antisense nucleic acid.
- 88. (Previously presented) A method as claimed in claim 86, wherein the transcription product comprises a partial sense copy of the *Z. mays* sequence orthologous to *Arabidopsis* DNA methyltransferase 1 (Met1) sequence.
- 89. (Previously presented) A method as claimed in claim 86, wherein the plant is a dicotyledonous plant.
- 90. (Previously presented) A method as claimed in claim 86, wherein the plant is a monocotyledonous plant.
- 91. (Previously presented) A method as claimed in claim 89, wherein the plant is a *Brassica* plant.
- 92. (Previously presented) A method as claimed in claim 89, wherein the plant is a *B. napus* plant.
- 93. (Previously presented) A method as claimed in claim 90, wherein the plant is a Zea mays plant.